



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,476	01/27/2004	Koji Shimizu	118245	9140
25944	7590	09/19/2006	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			AMADIZ, RODNEY	
			ART UNIT	PAPER NUMBER
			2629	

DATE MAILED: 09/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/764,476

Applicant(s)

SHIMIZU ET AL.

Examiner

Rodney Amadiz

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/27/04 &amp; 7/8/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2 and 5-7 rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants Admitted Prior Art (herein referred to as "AAPA"—Pg. 1, ¶ 0002-0003) in view of Ahan (GB 2,325,329).

As to **Claim 1**, AAPA teaches an electro-optical device, comprising: a plurality of scanning lines; a plurality of data lines; a plurality of pixels arranged corresponding to intersections between the scanning lines and the data lines to form a matrix (**AAPA—Pg. 1, ¶ 0002**). AAPA fails to teach a plurality of signal-supplying lines having first ends that are arranged close together and second ends that are arranged close together; a data-line selecting device having a plurality of selecting circuits, each selecting circuit supplying an image signal to one data line selected from a predetermined number of the data lines on the basis of a plurality of selection signals supplied through the plurality of signal-supplying lines; and a selection-signal supplying device to supply the plurality of selection signals from the first ends of the signal-supplying lines.

Examiner cites Ahan to teach a plurality of signal-supplying lines having first ends that are arranged close together and second ends that are arranged close together (**Fig. 2, note lines coming out of SWS1, SWS2 and SWS3**); a data-line

Art Unit: 2629

selecting device having a plurality of selecting circuits (**Fig. 2, Reference Numbers 54 and DMP1, DMP2, DMP3, DMP4 and DMP800**) each selecting circuit supplying an image signal to one data line selected from a predetermined number of the data lines on the basis of a plurality of selection signals supplied through the plurality of signal-supplying lines (**Fig. 2, note Image signal outputted from Reference Number 52 and note data lines DL1-DL2400 and Pg. 9, lines 5-30**); and a selection-signal supplying device to supply the plurality of selection signals from the first ends of the signal-supplying lines (**Fig. 2, note signals SWS1, SWS2 and SWS3—note that although not shown, it is inherent that these signals must come from a device**). At the time the invention was made it would have been obvious to a person of ordinary skill in the art to replace the generic data driver in the electro-optical device as taught by AAPA by the data driving sections 40 and 54 as taught by Ahan in the electro-optical device taught by AAPA so as to reduce the number of DAC and output amplifiers, reduce power loss and reduce the number of lead lines in the electro-optical device (**Ahan—Pg. 9, line 30—Pg. 10, line 15**).

As to **Claim 2**, AAPA teaches an electro-optical panel having the plurality of scanning lines, the plurality of data lines, the plurality of pixels, the plurality of signal-supplying lines (**AAPA—Pg. 1, ¶ 0002**). AAPA fails to teach the electro-optical panel including the plurality of signal supplying lines, data-line selecting device, the data-line selecting device provided as the first ends of the plurality of signal-supplying lines as well as the selection-signal supplying device being provided outside of the electro-optical panel and supplying the plurality of selection signals to the plurality of input

terminals. Examiner cites Ahan to teach an electro-optical panel (**Ahan—Fig. 2, Reference Number 30**) including a plurality of signal supplying lines (**Fig. 2, note lines coming out of SWS1, SWS2 and SWS3**), a data-line selecting device (**Ahan—Fig. 2, Reference Number 54**) and a plurality of input terminals provided as the first ends of the plurality of signal-supplying lines (**Ahan—Fig. 2, Input terminals to signals SWS1, SWS2 and SWS3**). Examiner also cites Ahan to teach the selection-signal supplying device being provided outside of the electro-optical panel and supplying the plurality of selection signals to the plurality of input terminals (**Fig. 2, note signals SWS1, SWS2 and SWS3 provided from outside panel 30—note that although not shown, it is inherent that these signals must come from a device**). At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the plurality of signal supplying lines, the data-line selecting device and a plurality of input terminals for the signal-supplying lines as taught by Ahan inside the electro-optical panel taught by AAPA in order to reduce the number of lead lines in the electro-optical device (**Ahan—Pg. 10, lines 12-14**). Furthermore, At the time the invention was made it would have been obvious to a person of ordinary skill in the art to provide the selection-signal supplying device outside the panel as taught by Ahan in the electro-optical device taught by AAPA so that repairs to it may be done quickly.

As to **Claim 5**, AAPA as modified by Ahan teaches each of the selecting circuits having a plurality of switching elements (**Ahan—Fig. 2, Reference Number DMP1—note transistors and Pg. 9, lines 15-23**) and having first input-output terminals connected to the data lines (**Ahan—Fig. 2, Reference Number DMP1 and data lines**

**DL1, DL2 and DL3 and Pg. 9, lines 15-30)**, second input-output terminals connected to a node supplying the image signals (**Ahan—Fig. 2, Reference Number DMP1 and 52**), and control input terminals to which the selection signals are supplied (**Ahan—Pg. 9, lines 5-30**).

As to **Claim 6**, AAPA as modified by Ahan teaches an electronic apparatus comprising the electro-optical device of Claim 1 (**AAPA—Pg. 1, ¶ 0002**).

As to **Claim 7**, AAPA teaches a method of driving an electro-optical panel having a plurality of scanning lines, a plurality of data lines, a plurality of pixels arranged corresponding to intersections between the scanning lines and the data lines to form a matrix (**AAPA—Pg. 1, ¶ 0002**). AAPA fails to teach a plurality of signal-supplying lines having first ends that are arranged close together and second ends that are arranged close together, and a data-line selecting device having a plurality of selecting circuits, each selecting circuit supplying an image data signal to one data line selected from a predetermined number of the data lines on the basis of a plurality of selection signals supplied through the plurality of signal-supplying lines, the method comprising: supplying the plurality of selection signals from the first ends of the signal-supplying lines.

Examiner cites Ahan to teach a plurality of signal-supplying lines having first ends that are arranged close together and second ends that are arranged close together (**Fig. 2, note lines coming out of SWS1, SWS2 and SWS3**), and a data-line selecting device having a plurality of selecting circuits (**Fig. 2, Reference Numbers 54 and DMP1, DMP2, DMP3, DMP4 and DMP800**), each selecting circuit supplying an

Art Unit: 2629

image data signal to one data line selected from a predetermined number of the data lines on the basis of a plurality of selection signals supplied through the plurality of signal-supplying lines (**Fig. 2, note signals SWS1, SWS2 and SWS3—note that although not shown, it is inherent that these signals must come from a device**), the method comprising: supplying the plurality of selection signals from the first ends of the signal-supplying lines (**Fig. 2, note signals SWS1, SWS2 and SWS3 that supply the signal-supplying lines**). At the time the invention was made it would have been obvious to a person of ordinary skill in the art to replace the generic data driver in the electro-optical device as taught by AAPA by the data driving sections 40 and 54 as taught by Ahan in the electro-optical device taught by AAPA so as to reduce the number of DAC and output amplifiers, reduce power loss and reduce the number of lead lines in the electro-optical device (**Ahan—Pg. 9, line 30—Pg. 10, line 15**).

3. Claims 3, 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA and Ahan as applied to claims 1, 2 and 5-7 above, and further in view of Hidehira et al. (U.S. Patent 6,483,565—herein referred to as Hidehira).

As to **Claim 3**, most of the limitations have already been addressed with respect to the rejection of claim 1 with the exception of supplying the plurality of selection signals from the first ends and the second ends of the signal-supplying lines. AAPA as modified by Ahan fails to teach supplying the plurality of selection signals from both ends of the signal-supplying lines. Examiner cites Hidehira to teach that it is well known in the art to supply the same signals to both ends of a line (**Hidehira—Col. 4, lines 9-**

Art Unit: 2629

**13).** At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the teachings as taught by Hidehira, wherein it is known to supply the same signals to a line, in the electro-optical device taught by AAPA as modified by Ahan in order to reinforce the signal.

As to **Claim 4**, all of the limitations have already been addressed with respect to the rejection of claims 2 and 3.

As to **Claim 8**, all of the limitations have already been addressed with respect to the rejection of claims 3 and 7.



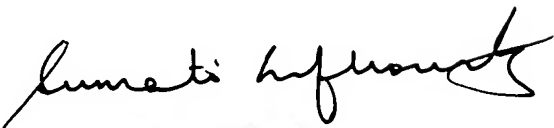
***Inquiries***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney Amadiz whose telephone number is (571) 272-7762. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

R.A.  
R.A.  
9/13/06  
Division 2629

  
SUMATI LEFKOWITZ  
SUPERVISORY PATENT EXAMINER